

CONVENTIONAL ENERGY SUPPLY



To: Fossil Fuel Energy Supply Leaders
Subject: Your Negotiating Goals in “World Energy”

Welcome to the global climate and energy policy conference. As leaders of fossil fuel industries, you will make decisions regarding energy supply over the coming decades.

Your group includes representatives of the coal, oil, and natural gas industries.

Within your group are publicly traded oil and gas companies (e.g., ExxonMobil, BP, Shell), national oil and gas companies (e.g., Petrobras, Saudi Aramco), coal companies, electric utilities heavily dependent on fossil fuels, and firms that supply equipment to these industries (e.g., Halliburton, Schlumberger; divisions of firms like Siemens and GE that supply fossil fuel extraction operations).

Your goal is to achieve the best outcome for the groups you represent and their stakeholders.

As a group, you will:

1. **Decide on** specific taxes and subsidies for coal, oil, and natural gas.
2. **Implement policies to reduce methane leakage** from natural gas production and distribution.
3. **Advocate for or against** the *Carbon Pricing* group setting a price on carbon emissions and where the revenue will go.
4. **Lobby and negotiate with** the other parties to encourage them to take actions that contribute to solving the climate change problem and help the industries and firms you represent. The fossil fuel industry should not be asked to bear the costs of emissions reductions alone.

The best available science shows that greenhouse gases (GHGs) emitted by human activity are already changing the climate, that the risks of further climate change to our economy and to human welfare are serious, and that avoiding the worst impacts is possible. The internationally agreed upon goal is to limit global warming to well below 2°C above preindustrial levels. Warming above this level threatens the economy and human welfare of all nations. Your own climate science experts agree with this assessment.

However, you must balance the imperative to prevent dangerous climate change with the needs of your key stakeholders, including your shareholders, employees, the public (your customers) and the policymakers who provide your license to operate, regulate your industry and affect your operating costs.

The world economy today depends on fossil fuels. Cutting fossil fuel use may be costly to consumers and the economy in the short run and certainly threatens the profitability of firms dependent on fossil fuels. Limiting warming to 2°C means a large fraction of known fossil fuel resources must remain in the ground, never to be produced. Firms now dependent on fossil fuels will have to reinvent themselves or lose business. However, for fossil fuel producers including firms in the coal, oil, and gas business, policies to limit warming to anything close to 2°C will cause severe financial hardship. Limiting fossil fuel production means most known fossil fuel reserves will become stranded assets, never generating return to shareholders or national governments, despite our investments in locating and developing them. As fossil fuel producers, you cannot agree to the loss of the value of these assets unless we are compensated for them. Curtailing fossil fuel exploration and production will also cost jobs.

Fossil fuels provide the vast majority of the global energy supply and in much of the world, the infrastructure for a fossil fuel-based economy is already in place, and in many developing nations new fossil energy capacity is still being rapidly developed. Abandoning this infrastructure would be costly. At the same time, the impacts of climate change including rising sea levels, more extreme weather and the

geopolitical dislocations these impacts may create pose serious risks to fossil and other existing energy supply assets. Growing climate damage increases the likelihood of regulations and other policy changes that will adversely affect the fossil industry even as they may stimulate low carbon, renewable sources. Investing in new capabilities and shaping policy and regulations would be advantageous to your industry. To that end, you are actively exploring how you might use your financial capital, your expertise, and society's existing infrastructure to compete in a changing world. Many trends point in the direction of opportunities within your sector to increase production of low carbon, renewable energy:

- Since 2009, wind energy production has been growing faster than 25%/year since 2009 (doubling in less than three years), and solar photovoltaic production has been growing faster than 50%/year (doubling in less than 1.5 years).
- The World Bank no longer funds construction of new coal-fired power plants.
- Solar energy costs have dropped significantly in recent years.
- Some oil companies (e.g., Total and Statoil) are investing heavily in renewable energy.
- In 2015 there was a 3.5% drop in coal production in China while investment in renewable energy hit an all-time high.

Despite these trends, it will take years for wind and solar to become a dominant energy source. Meanwhile, the drop in coal use threatens the value of assets you, the fossil industry, have a fiduciary duty to protect for our shareholders.

Notes on actions:

1. **You can propose policies to tax or subsidize coal, oil, or gas** to promote the development of an energy supply system that limits climate damage while preserving the profitability of your industry and staves off other policies that can hurt your industry.
2. **Methane (CH₄) is a powerful greenhouse gas.** The fossil fuel industry is responsible for much of the methane released to the atmosphere via leaks in the natural gas production and distribution supply chain. Currently it is estimated that on average 3% of methane that is extracted is lost, but you could reduce that percentage through better management.
3. **Take a position on carbon pricing.** Your economists acknowledge that internalizing the environmental and social costs of greenhouse gas emissions with a carbon price could be the best way to reduce global GHG emissions. But a carbon price above \$25-30/ton could unacceptably harm carbon-intensive energy production, by cutting demand for fossil fuels, increasing costs, and decreasing shareholder value for firms heavily dependent on fossil fuels, at least in the near term. You must demand compensation for such losses by asking that the revenue generated by any carbon price would go to you.
4. **Lobby and negotiate.** Other groups have the ability to take action that can mitigate GHG emissions and limit climate change. Although CO₂ from fossil fuel use contributes the most to climate change, other gases, including methane (CH₄) and nitrous oxide (N₂O), are potent GHGs, and their impact is growing. Global agriculture and forestry practices contribute greatly to emissions of these gases. The *Land & Agriculture* group can propose policies to reduce CH₄ and N₂O emissions that can help limit climate change. The *Energy Efficiency* group can invest in energy efficiency for buildings, industry, appliances and vehicles, saving money and advancing technology while also reducing carbon pollution. However, the reductions in energy demand from greater efficiency may cut revenue and profit for your fossil fuel production.

US\$/ton CO ₂	Examples of existing carbon prices
139	Swedish carbon tax
101	Swiss carbon tax
77	Finland carbon tax
64	Norway carbon tax (upper)
55	France carbon tax
36	Iceland carbon tax
	Denmark carbon tax (fossil fuels)
29	
27	BC carbon tax
25	UK carbon price floor
23	Alberta carbon tax
	Slovenia carbon tax, Korea
21	ETS
16	EU ETS
	California CaT, Ontario,
15	Quebec
9	Beijing pilot ETS
	Portugal carbon tax, Swiss
8	ETS
7	Shenzhen pilot ETS
	Shanghai pilot ETS, Tokyo
6	CaT, Colombia, Latvia
4	RGGI, Chongqing pilot ETS
3	Mexican carbon tax (upper)
1	Tianjin pilot ETS
<1	Poland carbon tax

World Bank, Ecofys (2018). *State and Trends of Carbon Pricing*